

## **ABSTRACT**

A method is provided for controlling the rates of concurrent digital transmissions using at least a first queue having a plurality of locations. For each transmission, an index corresponding to a data cell of the transmission is written at one of the locations in the first queue, and the locations of the first queue are successively surveyed at a rate corresponding to a cell transmission rate. If the surveyed location in the first queue contains an index, the corresponding data cell is transmitted, the location is freed, and the index is rewritten at the location in the first queue that is distant from the surveyed location by a value determined by the rate of the corresponding transmission. In one preferred method, indexes corresponding to high priority transmissions are written into the first queue and indexes corresponding to lower priority transmissions are written into a second queue. Also provided is a method for controlling the rates of concurrent digital transmissions using at least first and second queues.

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